



Federal Communications Commission
Washington, D.C. 20554

International Bureau

DA 08-1156

May 15, 2008

Patrick L. Donnelly
Satellite CD Radio, Inc.
1221 Avenue of the Americas
36th Floor
New York, NY 10020

Re: Application of Satellite CD Radio, Inc. to Modify Authorization for FM-6 Satellite,
IBFS File No. SAT-MOD-20080319-00074 (Call Sign S2105)

Dear Mr. Donnelly:

On March 19, 2008, Satellite CD Radio, Inc. (Satellite CD Radio) filed the above-captioned application to modify its Satellite Digital Audio Radio Service (SDARS) non-geostationary satellite orbit (NGSO) space station license to allow the launch and operation of the FM-6 satellite and, ultimately, reduce the number of authorized NGSO satellites in its network. For reasons discussed below, we dismiss the application as defective, without prejudice to refile.¹

In its application, Satellite CD Radio provides technical information about the proposed operations of the FM-6 satellite pursuant to Section 25.114 of the Commission's rules, including disclosure of the orbital debris mitigation plans for the space station as required by Section 25.114(d)(14).² As part of the information required by Section 25.114(d)(14), an applicant must submit information regarding the assessment and probability of a space station becoming a source of debris by collisions with large debris or other operational space stations.³ Specifically, for NGSO space stations, the rule requires:

The [orbital debris] statement must disclose the accuracy – if any – with which orbital parameters of non-geostationary satellite orbit space stations will be maintained, including apogee, perigee, inclination, and the right ascension of the ascending node(s).

The Commission has stated that the purpose of disclosing the accuracy with which orbital parameters will be maintained is to help interested third parties evaluate proposed systems with respect to collision avoidance and safe-flight profiles.⁴

Although Satellite CD Radio has provided information regarding the apogee and perigee of the FM-6 satellite and has specified that the satellite "will be maintained in longitude of apogee at 96.0 degrees West

¹ If Satellite CD Radio re-files an application in which the deficiencies identified in this letter have been corrected but otherwise identical to the one dismissed, it need not pay an application fee. See 47 C.F.R. § 1.1109(d).

² See 47 C.F.R. § 25.114(d)(14).

³ See 47 C.F.R. § 25.114(d)(14)(iii).

⁴ See Mitigation of Orbital Debris, *Second Report and Order*, 19 FCC Rcd 11567, 11584 (para. 37) (2004). See also Letter from Robert G. Nelson, Chief, Satellite Division, FCC, to Stephen D. Baruch, Counsel, DG Consents Sub, Inc., DA 07-3418, dated July 27, 2007 (IBFS File Nos. SAT-MOD-20070223-00038 and SAT-AMD-20070504-00066).

Longitude within +/- 0.5 degrees,”⁵ it has not disclosed all the information required under Section 25.114(d)(14)(iii). In particular, it is not clear from the modification application whether, for example, the apogee and perigee indicated represent target values, or whether they constitute an “outer boundary” for the satellite’s normal operations. Furthermore, Satellite CD Radio does not provide any information on the accuracy with which the inclination and the right ascension of the ascending node will be maintained. Without disclosure of the accuracy of all the proposed orbital parameters as part of the application,⁶ third parties will not be able to evaluate Satellite CD Radio’s proposed system adequately.

Accordingly, pursuant to Section 25.112(a)(1) of the Commission’s rules, 47 C.F.R. § 25.112(a)(1), and Section 0.261 of the Commission’s rules on delegations of authority, 47 C.F.R. § 0.261, we dismiss Satellite CD Radio’s above-captioned modification application without prejudice to refiling.

Although not grounds for dismissal, we request Satellite CD Radio to provide two additional clarifications in any future re-filing.

First, we ask that Satellite CD Radio provide additional information concerning its post-mission disposal plans for the FM-6 satellite as part of any future filing. As part of its current application, Satellite CD Radio proposes to dispose of the FM-6 satellite at end of life by circularizing the orbital altitude of the satellite to an operational perigee of approximately 46,325 kilometers.⁷ In any future filing, Satellite CD Radio should confirm the inclination of the disposal orbit, as well as provide any information it has supporting the long-term stability of the disposal orbit.

Second, space station antennas in the fixed-satellite service must be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band shall be at least 30 dB within its primary coverage area.⁸ Although Satellite CD Radio states in its Attachment A to its application that the cross polarization isolation of the satellite feeder link receiver antenna will exceed 30 decibels (dB) within the -3 dB gain contour of the receive frequency, this value stated as 25 dB in its schedule S filing. We request that Satellite CD Radio confirm the actual cross-polar isolation of its antenna as part of any future filing.

Sincerely,

Robert G. Nelson
Chief, Satellite Division
International Bureau

⁵ Application, Attachment A at 24.

⁶ We would consider disclosure of the target figure for apogee, perigee, and inclination, together with a range of values that might occur during normal operations, to be adequate. An alternative would be to specify maximum anticipated apogee altitude, minimum anticipated perigee altitude, and the range of anticipated inclinations.

⁷ Application, Attachment A at 36.

⁸ 47 C.F.R. § 25.210(i)(1).